**United States
Department of
Agriculture**

**Federal Crop
Insurance
Corporation**

**FCIC-20220 (06-2022)
Private product 508(h)**

TREND-ADJUSTED ACTUAL PRODUCTION HISTORY STANDARDS HANDBOOK

2023 and Succeeding Crop Years

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UNITED STATES DEPARTMENT OF AGRICULTURE
FARM PRODUCTION AND CONSERVATION
RISK MANAGEMENT AGENCY
KANSAS CITY, MO 64133

TITLE: TREND-ADJUSTED ACTUAL PRODUCTION HISTORY STANDARDS HANDBOOK	NUMBER: FCIC – 20220 OPI: Product Management
EFFECTIVE DATE: 2023 and Succeeding Crop Years	ISSUE DATE: June 30, 2022
SUBJECT: Provides the procedures to administer the Trend-Adjusted Actual Production History Option	APPROVED: */s/ Richard Flournoy* **Deputy Administrator for Product Management**

REASON FOR ISSUANCE

The FCIC 20220 Trend-Adjusted APH Standards Handbook is being issued to provide procedures to administer the Trend-Adjusted APH program for the 2023 and succeeding crop years

SUMMARY OF CHANGES

Listed below are the changes to the 2023 FCIC 20220 Trend-Adjusted Actual Production History Standards Handbook with significant content change. All changes, and additions are highlighted. Minor changes and corrections are not included in this listing. *** used throughout the handbook indicate where major deletions occurred.

Reference	Description of Change
Throughout Handbook	Updated Para. Numbers and References throughout the handbook to conform with the new handbook standards.
Throughout Handbook	Updated years throughout handbook.
Part 1	Page 1: Added Part 1: General Information and Responsibilities to conform with new handbook standards.

RISK MANAGEMENT AGENCY TREND-ADJUSTED ACTUAL PRODUCTION HISTORY STANDARDS HANDBOOK

CONTROL CHART   TP 2

	TP Page(s)	TC Page(s)	Text Page(s)	Exhibit Page(s)	Date	Directive Number
Current Index	1-2	1	1-11	12-29	06-2022	FCIC-20220

FILING INSTRUCTIONS

This handbook replaces FCIC-20220-1 Trend-Adjusted Actual Production History Standards Handbook, dated November 30, 2021. This handbook is effective upon approval or until obsoleted.

TREND-ADJUSTED ACTUAL PRODUCTION HISTORY STANDARDS HANDBOOK
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PART 1: GENERAL INFORMATION RESPOSIBILITIES

1 General Information

A. Purpose

The purpose of this handbook is to provide the official FCIC-approved underwriting standards for Trend-Adjusted APH.

B. Source of Authority

Trend-Adjusted APH was approved by the FCIC Board of Directors under Section 508(h) of the Federal Crop Insurance Act.

C. Related Handbooks

The following table provides directives closely related to this handbook. However, other RMA approved handbooks may reference this handbook when applicable.

Handbook	Relation/Purpose
CIH	This handbook provides the official FCIC-approved underwriting standards for policies administered by AIPs for the General Administrative Regulations, Actual Production History Regulation Subpart G; Common Crop Insurance Policy Basic Provisions and Area Risk Protection Regulations.
GSH	This handbook provides the official FCIC-approved standards for policies administered by AIPs under the General Administrative Regulations, Common Crop Insurance Policy Regulations Basic Provisions, including the Catastrophic Risk Protection Endorsement, Actual Production History Regulation Subpart G; the Area Risk Protection Insurance Regulations Basic Provisions; the Stacked Income Protection Plan of Insurance; the Rainfall Index Plan; and the Whole-Farm Revenue Protection Pilot Policy.

D. Program Duration

Trend-Adjusted APH is available until cancelled by the FCIC Board of Directors.

E. AIP Option to Offer

In accordance with Section II. (a)(3) of the SRA, AIPs are not required to offer Trend-Adjusted APH to producers. Accordingly, each AIP must determine whether it will offer Trend-Adjusted APH. AIPs that elect to offer Trend-Adjusted APH must offer it to all eligible producers, and must administer the program according to the policies approved and issued by FCIC, procedures in this handbook and the provisions of Section II. (a)(3) of the SRA.

2 Responsibilities

AIPs must use standards, procedures, methods and instructions as authorized by FCIC in the sale and service of crop insurance contracts. Each AIP is responsible for using RMA approved procedures. Procedures herein must be administered on a policy basis.

3   Title VI of the Civil Rights Act of 1964

The USDA prohibits discrimination against its customers. Title VI of the Civil Rights Act of 1964 provides that "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Therefore, programs and activities that receive Federal financial assistance must operate in a non-discriminatory manner. Also, a recipient of RMA funding may not retaliate against any person because they opposed an unlawful practice or policy, or made charges, testified or participated in a complaint under Title VI.

It is the AIP's responsibility to ensure that standards, procedures, methods and instructions, as authorized by FCIC in the sale and service of crop insurance contracts, are implemented in a manner compliant with Title VI. Information regarding Title VI of the Civil Rights Act of 1964 and the program discrimination complaint process is available on the USDA public website at www.ascr.usda.gov/.

4-10   (Reserved)

PART 2: OVERVIEW AND GENERAL REQUIREMENTS

11   **Overview**

Trend-Adjusted APH, if elected, adjusts yields in APH databases to reflect increases in yields through time in the county. Trend adjustments are made on each eligible yield within a qualifying APH database based on the county's historical yield trend. The actuarial documents provide the historical yield trend. The approved APH yield is calculated using trend-adjusted yields and any other applicable yields within the APH database.

12   **Availability**

See actuarial documents for the applicable county/crop/P/Ts available for Trend-Adjusted APH.

13   **Eligibility**

A.   **Insureds' Eligibility**

An insured must be in an eligible county and have at least one APH database with an actual yield in one of the four most recent crop years for the crop/county.

B.   **Election**

To be applicable for the current crop year, the insured must elect Trend-Adjusted APH:

(1)   by the applicable SCD;

(2)   on a crop/county basis; and

(3)   on an application or policy change form by including the option code of "TA."

C.   **Coverage Levels**

Trend-Adjusted APH is available for additional coverage level policies. Trend-Adjusted APH is not available for CAT policies.

D.   **Continuous**

Trend–Adjusted APH is a continuous election that remains in effect unless:

(1)   cancelled in writing on or before the applicable cancellation date for the effective crop year; or

(2)   terminated by the FCIC.

E.   **Cancellation of Trend-Adjusted APH by Insured**

When an insured cancels Trend-Adjusted APH:

(1)   trend adjustments to any yield will no longer apply;

    E. **Cancellation of Trend-Adjusted APH by Insured (Continued)**

        (2)   if SA T-Yields were calculated from approved APH yields containing actual yields with trend adjustments, the SA T-Yields must be replaced with the variable T-Yield;

        (3)   yield substitution and yield floors may apply, when elected, and as applicable.

    F. **Termination of Trend-Adjusted APH by FCIC**

    If Trend-Adjusted APH is terminated by FCIC:

        (1)   trend adjustments to any yield will no longer apply;

        (2)   if SA T-Yields were calculated from approved APH yields containing actual yields with trend adjustments, SA T-Yields must be recalculated based on the current year's approved APH yields without trend adjustments; and

        (3)   yield substitution and yield floors may apply, when elected, and as applicable.

    G. **Transfers**

    When the crop's policy is transferred to a different AIP, Trend-Adjusted APH will be considered cancelled at the time the crop policy is cancelled. If the crop policy is transferred to a different AIP, the insured may elect Trend-Adjusted APH with the assuming AIP on or before the SCD.

14 **Applicability of Yield Floors, Yield Reductions, YA and YE**

    A. **Yield Floors**

    If Trend-Adjusted APH is elected for a crop/county, yield limitations do not apply regardless of whether an APH database qualifies for trend adjustment.

    Exception: If Trend-Adjusted APH is elected for a crop/county and the actuarial documents do not authorize a yield trend for a specific P/T, yield floors are applicable for those APH databases, if they otherwise qualify.

    B. **Yield Reductions**

    Procedures concerning yield reductions contained in the CIH Part 16 Section 5 are unaffected when Trend-Adjusted APH is elected.

        (1)   Actual yields that have been reduced due to excessive yields are not eligible for trend adjustment. See CIH Para. 1673 for excessive actual yield procedures.

        (2)   Reductions of approved APH yields due to inconsistent approved APH yields or different production methods will apply even when yields within the APH database have been adjusted for trend. See CIH Para. 1674 and 1675 for reductions due to inconsistent approved APH yields or different production methods.

      C.   **Yield Adjustments (YA) (Substitutions)**

Yield substitutions apply when elected by the insured. Yield substitutions are based on 60 percent of the applicable T-Yield before adjustment for yield trend, as applicable.

Exception: For BFRs, yield substitutions are based on 80 percent of the applicable T-Yield.

      D.   **Yield Exclusions (YE)**

YE applies when elected by the insured. When an actual yield in an eligible crop year is excluded, an excluded actual yield is not considered for TA purposes when determining:

      (1)   whether an APH database qualifies for TA by having at least an actual yield in one of the four most recent crop years, see Para. 21;

      (2)   the applicable TA percentages, see Para. 31B; and

      (3)   the highest actual yield in the APH database with one year of trend adjustment applied for the TA limitation of the approved APH yield for the APH database (Para. 31H).

      E.   **Yield Cups (YC)**

YC applies when elected by the insured. Application of YA, YE, or TA on an actual yield for an eligible crop year within an APH database will not affect the calculation of the approved APH yield if a yield cup applies to the APH database.

      F.   **Quality Loss Option (QL)**

When an actual yield is replaced with the pre-quality actual yield for QL and TA has been elected, TA will apply to the pre-quality actual yield that replaced the actual yield.

15-20 **(Reserved)**

PART 3: APPLICABILITY OF TREND-ADJUSTED APH

21   **APH Database Qualifications**

     (1)   The APH database must have at least an actual yield in one of the four most recent crop years.

     (2)   If the APH database contains fewer than four actual yields in the 12 most recent crop years the trend adjustment is reduced. See Para. 31B for the applicable percentage of reduction.

     (3)   For the purposes of Trend-Adjusted APH, yields identified with the following yield descriptors are considered actuals: A, AP, AY, AX, BF, DA, FA, J, NA, NW, P, PA, PR, PW, VF, and WY, see CIH Exh. 15.

22   **Yields Eligible for Trend Adjustment**

Yields contained in a qualifying APH database identified with the following yield descriptors are eligible for trend adjustment: A, AP, AY, BF, DA, FA, NA, NW, PA, PR, PW, VF, and WY, see CIH Exh. 15.

23   **Master Yields (MY)**

If available for the crop and elected by the insured, MYs are eligible for Trend-Adjusted APH. Trend adjustments will be made to the actual yields in the MY summary APH database.

24   **Yield Not Eligible for Trend Adjustment**

     A.   **Added Land and New Crop/Practice/Type (P/T)**

     (1)   For Added land and new crop/P/T APH databases using SA T-Yields identified with an "L", "IL", or "C" yield descriptors, trend adjustments do not apply. Trend adjustments only apply to actual yields.

     (2)   While added land and new crop/P/T procedures (CIH Part 17, Sections 7 and 8) are not affected by the election of TA, the calculation for SA T-Yields is changed when an approved APH yield includes trend adjustment. SA T-Yields will continue to be determined based on the crop year the APH database is established, by crop/P/T/TMA. However, instead of using the approved APH yield from each of the insured's existing APH databases for the policy that have at least one year of actual/assigned yields, by crop/P/T/TMA to calculate the SA T-Yield, use:

          (a)   the adjusted yield for APH databases with yields that have trend adjustment with at least one actual/assigned yield; and

          (b)   the approved APH yield for APH databases where actual yields have not been trended with at least one actual/assigned yield.

All other calculations and requirements for use of the SA T-Yield remain unchanged.

B.   New Producer

Trend adjustment will not apply to new producer T-Yields. New producer T-Yields (identified with an "I" or "IL" yield descriptor) will not be adjusted for trend. However, actual yields, when qualified, may be trended even when contained in an APH database with new producer T-Yields.

C.   North Dakota Personal Transitional Yield (PTY)

For APH databases using the PTY (identified with the "K" yield indicator), T-Yields based on the PTY will not be adjusted for trend. Trend-Adjusted APH does not change the PTY calculation. The PTY is calculated by dividing total production by the total acreage for a crop/P/T/TMA for each year, with the sum of all years divided by the number of years. Therefore, actual yields are not trended in the PTY calculation. However, actual yields within the APH database may be trend adjusted.

25   Written Agreements

Trend-Adjusted APH will not apply to any APH databases insured under a written agreement, with the following exceptions:

(1)   High Risk Land Written Agreement (HR); and

(2)   Written Unit Agreement (UA).

26   Production Reporting

Selecting Trend-Adjusted APH requires no additional production reporting by the insured.

27-30   (Reserved)

PART 4: CALCULATIONS

31   Trend-Adjusted APH Calculation

The following subparagraphs explain the process and calculations of the Trend-Adjusted APH program.

A.   Crop/County Trend Adjustment

Each eligible crop/county/P/T will have a trend adjustment established in the actuarial documents.

B.   Applicable Trend Adjustment Percentages

Each eligible yield in a qualifying APH database will be adjusted by the applicable trend adjustment percentage determined by the number of actual yields in the previous 12 crop years in the APH database, see Para. 21 for applicable actual yields. The applicable trend adjustment percentages are as follows:

(1)   one actual yield = 25 percent of trend adjustment;

(2)   two actual yields = 50 percent of trend adjustment;

(3)   three actual yields = 75 percent of trend adjustment; or

(4)   four or more actual yields = 100 percent of trend adjustment.

C.   Trend Adjustment for Age of Eligible Yield

The trend adjustment is applied to each eligible yield in a qualifying APH database and will be adjusted upward by the trend adjustment multiplied by the age of the eligible yield. The age of the eligible yield is determined by subtracting the yield year from the current crop year.

Example: The crop year is 2022, the trend adjustment is 2 in the actuarial documents, and the insured has eligible yields in 2021, 2020, 2019 and 2018 crop years. Below are the trend adjustments to be applied for each specific yield year:

(1)   2021   (2022-2021) * 2 bushels = 2;

(2)   2020   (2022-2020) * 2 bushels = 4;

(3)   2019   (2022-2019) * 2 bushels = 6; and

(4)   2018   (2022-2018) * 2 bushels = 8.

D.   Applying Trend Adjustment

The trend adjustment, adjusted by the applicable trend adjustment percentage, will be added to each eligible yield, see Para. 22 in each qualifying APH database. This is a calculation only, the yields within the APH database remain unchanged.

E.   Calculation of Approved APH Yield

The calculation of the approved APH yield is unchanged, except trend adjustments are applied to eligible yields before averaging.

F.   Calculation of the Rate Yield

The rate yield is equal to the average yield when Trend-Adjusted APH applies to an APH database with the following exceptions:

(1)   the approved APH yield is reduced due to inconsistent approved APH yields, see CIH Para. 1674 for inconsistent approved APH yield determination procedures. In these situations, the rate yield will be equal to the approved APH yield; and

(2)   the approved APH yield is reduced due to different production methods being carried out for the current crop year which results in lower actual yields, see CIH Para. 1675 for different production method determination procedures. In these situations, the rate yield will be equal to the approved APH Yield.

G.   Calculation of Adjusted Yield (APH Yield without Trend Adjustment)

AIPs must also calculate the adjusted yield which is the APH yield without trend adjustment and is calculated by the average of the yields in the APH database:

(1)   without trend adjustment;

(2)   without yield limitations (cups and yield floors);

(3)   prior to any yield exclusions; and

(4)   with yield substitutions, if YA has been elected by the insured.

The adjusted yield is not the same as the rate yield. The increase in coverage resulting from the Trend-Adjusted APH yield relative to the APH yield without trend adjustment (adjusted yield) is used to determine the appropriate premium rate.

Exception: When yield reductions apply to the APH database the adjusted yield must equal the approved APH yield.

H.   Trend Adjustment Limitation of the Approved APH Yield

The approved APH yield for the APH database is limited to the highest actual yield (or pre-quality actual yield if QL has been elected and an actual yield has been replaced with a pre-quality actual yield) in the APH database with 1 year of trend adjustment applied.

Example 1:   The highest actual yield within the APH database is 150 bushels and the trend adjustment is 2. Therefore, the trend adjustment limitation is 152 (150 + 2). The average of all yields in the APH database is 154; however, the approved APH yield is limited to 152 due to the trend adjustment limitation.

31   Trend-Adjusted APH Calculation (Continued)

H.   Trend Adjustment Limitation of the Approved APH Yield (Continued)

Example 2:   The highest actual yield within the APH database is 100 bushels and the trend adjustment is 2; however, QL was elected and used, and the highest pre-quality actual yield is 140. Therefore, the trend adjustment limitation is 142 (140 + 2). The average of all yields in the APH database is now 130. The approved APH yield is not limited to 102 (actual yield) due to QL being elected and used.

Exception: The approved APH yield will not be less than the adjusted yield, see Subpara. G.

Example: The applicable T-Yield is 100 bushels and the trend adjustment factor is 2. The APH database has only one actual yield equal to 10 bushels. Therefore, the trend adjustment limitation is 12 (10 + 2). Due to this exception, the approved APH yield would be 90 bushels (100T + 100T + 100T +1 0A/4 years = 90), rather than being limited to 12 bushels due to the trend adjustment limitation.

32   Steps for Calculating the Approved APH Yield When Trend-Adjusted APH is Elected

Follow the steps below to calculate the approved APH yield for an APH database when Trend-Adjusted APH elected.

Step 1:   Determine if the APH database has at least an actual yield in one of the four most recent crop years to determine if the APH database qualifies for trend adjustment. If not, APH database is not eligible for trend adjustment. If there is, continue to next step;

Step 2:   Determine the number of actual yields in the most recent 12 crop years to determine the trend adjustment percentage for the APH database, see Para. 31B;

Step 3:   Multiply the trend adjustment contained in the actuarial documents by the trend adjustment percentage determined in step 2. Round result to four decimal places;

Step 4:   Determine age of each eligible yield, see Para. 31C;

Step 5:   Multiply the age of each eligible yield by the trend adjustment, adjusted by applicable trend adjustment percentage determined in step 3. Round result to four decimal places;

Step 6:   Add the result of step 5 to each eligible yield to obtain the trend adjustment yield for each crop year, see Para. 31D. Round result to whole number;

Step 7:   Calculate the approved APH yield by summing trend-adjusted yields and all other yields within the APH database and dividing by the number of yields in the APH database, see Para. 31E; and

32   Steps for Calculating the Approved APH Yield When Trend-Adjusted APH is Elected (Continued)

Step 8:   Compare the approved APH yield to the trend adjustment limitation, see Para. 31H. If the approved APH yield is less than the trend adjustment limitation, then the final approved APH yield equals the Trend-Adjusted APH yield from step 7. If the yield calculated in step 7 is greater than the trend adjustment limitation, then the final approved APH yield equals the trend adjustment limitation.

Exception: If the insured elected yield cup option, and does not opt-out of the cup applying to an APH database and the APH database qualifies for the cup in accordance with CIH Part 16 Section 4, then the approved APH yield is the prior year's approved APH yield times 0.9.

Step 9:   Calculate the adjusted yield, see Para. 31G.

33-40   (Reserved)

EXHIBITS

Exhibit 1   Acronyms and Abbreviations

Approved Acronyms and Abbreviations	Term
AIP	Approved Insurance Provider
APH	Actual Production History
BFR/VFR	Beginning Farmer and Rancher/Veteran Farmer and Rancher
CAT	Catastrophic Risk Protection
CIH	Crop Insurance Handbook
Exh.	Exhibit
FCIC	Federal Crop Insurance Corporation
Para.	Paragraph
PASS	Policy Acceptance Storage System
PTY	Personal Transitional Yield
P/T	Practice/Type
RMA	Risk Management Agency
SA T-Yield	Simple Average Transitional-Yield
SCD	Sales Closing Date
Subpara.	Subparagraph
T-Yield	Transitional-Yield

Exhibit 2   (Reserved)

Exhibit 3   (Reserved)

Exhibit 4   Example Trend-Adjusted APH Database

Insured has produced corn in a single basic unit (BU) APH database since 2019. The county T-Yield is 166 bushels. For 2023, the insured has elected YA (60 percent of T-Yield = 100 bushels); however, it does not apply to any of the actual yields reported. The insured has also elected Trend-Adjusted APH. The trend adjustment for corn in the insured's county is 2. The insured provides an acceptable production report in 2023 and APH database is updated.

Original APH Database

2023	Unit # 0001-0000 BU	Corn (0041)	NI (003)	Grain (016)
Year	Production	Acres		Yield
2019	22,500	150.0		A150
2020	19,300	100.0		A193
2021	26,400	150.0		A176
2022	19,700	100.0		A197
		Approved Yield		179
T-Yield = 166		Average Yield		179
		Rate Yield		179

To calculate the approved APH yield using trend adjustment:

Step 1:   The APH database has at least an actual yield in one of the four most recent crop years, qualifying for trend adjustment.

Step 2:   The APH database has four actual yields in the most recent 12 crop years; therefore, the applicable trend adjustment percentage is 100 percent.

Step 3:   1.00 * 2 = 2

Step 4:   (a)   2022: 2023 - 2022 = 1

(b)   2021: 2023 - 2021 = 2

(c)   2020: 2023 - 2020 = 3

(d)   2019: 2023 - 2019 = 4

Step 5:   (a)   2022: 1 * 2 = 2

(b)   2021: 2 * 2 = 4

(c)   2020: 3 * 2 = 6

(d)   2019: 4 * 2 = 8

Step 6:   (a)   2022: 197 + 2 = 199

(b)   2021: 176 + 4 = 180

Exhibit 4   Example Trend-Adjusted APH Database (Continued)

(c)   2020: 193 + 6 = 199

(d)   2019: 150 + 8 = 158

Step 7:   (199 + 180 + 199 + 158) / 4 = 184

Step 8:   184 < (197 + 2 = 199). Approved APH yield = 184.

Step 9:   (197 + 176 + 193 + 150) / 4 = 179. APH yield without trend adjustment = 179.

Resulting APH Database

2023	Unit # 0001-0000 BU	Corn (0041) NI (003)	Grain (016)
Year	**Production**	**Acres**	**Yield**
2019	22,500	150.0	A150
2020	19,300	100.0	A193
2021	26,400	150.0	A176
2022	19,700	100.0	A197
		Approved Yield	**184**
T-Yield = 166		Average Yield	179
		Rate Yield	179

The insured has elected Trend-Adjusted APH for corn in the county. The insured has five optional units (OU). The county T-Yield is 130 bushels (60 percent of the T-Yield = 78) and the insured has elected yield substitution (YA). The trend adjustment from the actuarial documents for the crop/county is two bushels a year. The five APH databases below are prior to any trend adjustment.

Original APH Databases

2023   **Unit # 0001-0001 OU**

Corn (0041)   **NI (003)**   **Grain (016)**

Year	Production	Acres	Yield
2013	19,950	150.0	A133
2014	14,500	100.0	A145
2015	25,050	150.0	A167
2016	12,200	100.0	A122
2017	23,550	150.0	A157
2018	16,500	100.0	A165
2019	25,650	150.0	A171
2020	19,300	100.0	A193
2021	26,400	150.0	A176
2022	19,700	100.0	A197
		Approved Yield	163
T-Yield	130	Average Yield	163
		Rate Yield	163

2023   **Unit # 0001-0002 OU**

Corn (0041)   **NI (003)**   **Grain (016)**

Year	Production	Acres	Yield
2014			T130
2015			Z
2016			Z
2017	11,600	80.0	A145
2018			Z
2019			Z
2020	12,160	80.0	A152
2021			Z
2022	11,840	80.0	A148
		Approved Yield	144
T-Yield	130	Average Yield	144
		Rate Yield	144

2023   **Unit # 0001-0003 OU**

Corn (0041)   **NI (003)**   **Grain (016)**

Year	Production	Acres	Yield
2004	0	200.0	A0
2007	27,600	200.0	A138
2009	29,400	200.0	A147
2016			Z
2017			Z
2018			Z
2019	40,200	200.0	A201
2020			Z
2021			Z
2022	33,400	200.0	A167
		Approved Yield	146
T-Yield	130	Average Yield	131
		Rate Yield	131

2023   **Unit # 0001-0004 OU**

Corn (0041)   **NI (003)**   **Grain (016)**

Year	Production	Acres	Yield
2019			T130
2020			T130
2021			T130
2022	5,840	40.0	A146
		Approved Yield	134
T-Yield	130	Average Yield	134
		Rate Yield	134

Original APH Databases (Continued)

2023	Unit # 0001-0005 OU	Corn (0041)	NI (003)	Grain (016)
Year	Production	Acres	Yield
2017			L154
2018			L154
2019			L154
2020			L154
2021			Z
2022			Z
		Approved Yield	154
T-Yield = 154		Average Yield	154
		Rate Yield	154

A.   Example of APH database with Full Trend Adjustment

Step 1:   The APH database for 0001-0001 has at least an actual yield in one of the four most recent crop years, qualifying for trend adjustment.

Step 2:   The APH database has 10 actual yields in the most recent 12 crop years; therefore, the applicable trend adjustment percentage is 100 percent.

Step 3:   1.00 * 2 = 2

Step 4:   (a)   2022: 2023 - 2022 = 1

(b)   2021: 2023 - 2021 = 2

(c)   2020: 2023 - 2020 = 3

(d)   2019: 2023 - 2019 = 4

(e)   2018: 2023 - 2018 = 5

(f)   2017: 2023 - 2017 = 6

(g)   2016: 2023 - 2016 = 7

(h)   2015: 2023 - 2015 = 8

(i)   2014: 2023 - 2014 = 9

(j)   2013: 2023 - 2013 = 10

A.   **Example of APH database with Full Trend Adjustment (Continued)**

Step 5:   (a)   2022: 1 * 2 = 2

(b)   2021: 2 * 2 = 4

(c)   2020: 3 * 2 = 6

(d)   2019: 4 * 2 = 8

(e)   2018: 5 * 2 = 10

(f)   2017: 6 * 2 = 12

(g)   2016: 7 * 2 = 14

(h)   2015: 8 * 2 = 16

(i)   2014: 9 * 2 = 18

(j)   2013: 10 * 2 = 20

Step 6:   (a)   2022: 197 + 2 = 199

(b)   2021: 176 + 4 = 180

(c)   2020: 193 + 6 = 199

(d)   2019: 171 + 8 = 179

(e)   2018: 165 + 10 = 175

(f)   2017: 157 + 12 = 169

(g)   2016: 122 + 14 = 136

(h)   2015: 167 + 16 = 183

(i)   2014: 145 + 18 = 163

(j)   2013: 133 + 20 = 153

Step 7:   (199 + 180 + 199 + 179 + 175 + 169 + 136 + 183 + 163 + 153) / 10 = 174

Step 8:   174 < (197 + 2 = 199). Approved APH yield = 174.

Step 9:   (197 + 176 + 193 + 171 + 165 + 157 + 122 + 167 + 145 + 133) / 10 = 163

APH yield without trend adjustment = 163.

A.   Example of APH database with Full Trend Adjustment (Continued)

Resulting APH Database

2023	Unit # 0001-0001 OU	Corn (0041)	NI (003)	Grain (016)
Year	**Production**	**Acres**	**Yield**
2013	19,950	150.0	A133
2014	14,500	100.0	A145
2015	25,050	150.0	A167
2016	12,200	100.0	A122
2017	23,550	150.0	A157
2018	16,500	100.0	A165
2019	25,650	150.0	A171
2020	19,300	100.0	A193
2021	26,400	150.0	A176
2022	19,700	100.0	A197
		Approved Yield	**174**
T-Yield = 130		Average Yield	163
		Rate Yield	163

B.   Example of APH database with 75 percent of Trend Adjustment

Step 1:   The APH database for 0001-0002 has at least an actual yield in one of the four most recent crop years, qualifying for trend adjustment.

Step 2:   The APH database has three actual yields in the most recent 12 crop years; therefore, the applicable trend adjustment percentage is 75 percent.

Step 3:   0.75 * 2 = 1.5

Step 4:   (a)   2022: 2023 - 2022 = 1

            (b)   2020: 2023 - 2020 = 3

            (c)   2017: 2023 - 2017 = 6

            (d)   2014: not eligible for trend

Step 5:   (a)   2022: 1 * 1.5 = 1.5

            (b)   2020: 3 * 1.5 = 4.5

            (c)   2017: 6 * 1.5 = 9

            (d)   2014: not eligible for trend

B.   **Example of APH database with 75 percent of Trend Adjustment (Continued)**

Step 6:   (a)   2022: 148 + 1.5 = 149.5

(b)   2020: 152 + 4.5 = 156.5

(c)   2017: 145 + 9 = 154

(d)   2014: 130 + 0 = 130

Step 7:   (150 + 157 + 154 + 130) / 4 = 148

Step 8:   148 < (152 + 2 = 154). Approved APH yield = 148.

Step 9:   (148 + 152 + 145 + 130) / 4 = 144. APH yield without trend adjustment = 144.

Resulting APH Database

2023	Unit # 0001-0002 OU	Corn (0041)	NI (003)	Grain (016)
Year	**Production**	**Acres**		**Yield**
2014				T130
2015				Z
2016				Z
2017	11,600	80.0		A145
2018				Z
2019				Z
2020	12,160	80.0		A152
2021				Z
2022	11,840	80.0		A148
		Approved Yield		**148**
T-Yield = 130		Average Yield		144
		Rate Yield		144

C.   **Example of APH database with 50 percent of Trend Adjustment**

Step 1:   The APH database for 0001-0003 has at least an actual yield in one of the four most recent crop years, qualifying for trend adjustment.

Step 2:   The APH database has two actual yields in the most recent 12 crop years; therefore, the applicable trend adjustment percentage is 50 percent.

Step 3:   0.50 * 2 = 1

C.   Example of APH database with 50 percent of Trend Adjustment (Continued)

Step 4:   (a)   2022: 2023 - 2022 = 1

(b)   2019: 2023 - 2019 = 4

(c)   2009: 2023 - 2009 = 14

(d)   2007: 2023 - 2007 = 16

(e)   2004: 2022 - 2004 = 19

Step 5:   (a)   2022: 1 * 1 = 1

(b)   2019: 4 * 1 = 4

(c)   2009: 14 * 1 = 14

(d)   2007: 16 * 1 = 16

(e)   2004: 19 * 1 = 19

Step 6:   (a)   2022: 167 + 1 = 168

(b)   2019: 201 + 4 = 205

(c)   2009: 147 + 14 = 161

(d)   2007: 138 + 16 = 154

(e)   2004: 78 + 19 = 97 (78 is used due to YA election)

Step 7:   (168 + 205 + 161 + 154 + 97) / 5 = 157

Step 8:   157 < (201 + 2 = 203). Approved APH yield = 157.

Step 9:   (167 + 201 + 147 + 138 + 78) / 5 = 146. APH yield without trend adjustment = 146.

C.   **Example of APH database with 50 percent of Trend Adjustment (Continued)**

Resulting APH Database

2023	Unit # 0001-0003 OU	Corn (0041)	NI (003)	Grain (016)
Year	**Production**	**Acres**		**Yield**
2004	0	200.0		A0
2007	27,600	200.0		A138
2009	29,400	200.0		A147
2016				Z
2017				Z
2018				Z
2019	40,200	200.0		A201
2020				Z
2021				Z
2022	33,400	200.0		A167
		Approved Yield		**157**
T-Yield = 130		Average Yield		131
		Rate Yield		131

D.   **Example of APH database with 25 percent of Trend Adjustment**

Step 1:   The APH database for 0001-0004 has at least an actual yield in one of the four most recent crop years, qualifying for trend adjustment.

Step 2:   The APH database has one actual yield in the most recent 12 crop years; therefore, the applicable trend adjustment percentage is 25 percent.

Step 3:   0.25 * 2 = 0.5

Step 4:   (a)   2022: 2023 - 2022 = 1

       (b)   2021: not eligible for trend

       (c)   2020: not eligible for trend

       (d)   2019: not eligible for trend

Step 5:   (a)   2022: 1 * 0.5 = 0.5

       (b)   2021: not eligible for trend

       (c)   2020: not eligible for trend

       (d)   2019: not eligible for trend

D.   **Example of APH database with 25 percent of Trend Adjustment (Continued)**

Step 6:   (a)   2022: 146 + 0.5 = 146.5

                     (b)   2021: 130 + 0 = 130

                     (c)   2020: 130 + 0 = 130

                     (d)   2019: 130 + 0 = 130

Step 7:   (147 + 130 + 130 + 130) / 4 = 134

Step 8:   134 < (146 + 2 = 148). Approved APH yield = 134.

Step 9:   (146 + 130 + 130 + 130) / 4 = 134. APH yield without trend adjustment = 134.

Resulting APH Database

2023	Unit # 0001-0004 OU	Corn (0041)	NI (003)	Grain (016)
Year	**Production**	**Acres**		**Yield**
2019				T130
2020				T130
2021				T130
2022	5,840	40.0		A146
		Approved Yield		**134**
T-Yield = 130		Average Yield		134
		Rate Yield		134

E.   **Example of APH database with no Trend Adjustment**

Step 1:   The APH database for 0001-0005 does not have at least an actual yield in one of the four most recent crop years; therefore, does not qualify for trend adjustment.

Resulting APH Database

2023	Unit # 0001-0005 OU	Corn (0041)	NI (003)	Grain (016)
Year	**Production**	**Acres**		**Yield**
2017				L154
2018				L154
2019				L154
2020				L154
2021				Z
2022				Z
		Approved Yield		**154**
T-Yield = 154		Average Yield		154
		Rate Yield		154

The insured has elected Trend-Adjusted APH (TA) for soybeans in the county. The insured has OUs. The county T-Yield is 29 bushels (60 percent of the T-Yield = 17) and the insured has elected yield substitution (YA) and yield exclusion (YE). The trend adjustment from the actuarial documents for the crop/county is 0.50 bushels a year. Crop year 2019 is eligible for yield exclusion for soybeans in the county and the insured did not choose to opt-out of the exclusion. The APH database below is prior to any trend adjustment or YE.

Original APH Database

2023	Unit # 0001-0002 OU	Soybeans (0081)	NFAC (053)	Commodity (091)
Year	**Production**	**Acres**		**Yield**
2017				T29
2018				T29
2019	600	100.0		A6
2020	1,400	100.0		A14
		Approved Yield		23
T-Yield = 29		Average Yield		20
		Rate Yield		20

Step 1:   The APH database for 0001-0002 has one actual yield in one of the four most recent crop years after yield exclusion (see Para. 14D and 21), qualifying for trend adjustment.

Step 2:   The APH database has one actual yield in the most recent 12 crop years after yield exclusion (see Para. 14D and 31B); therefore, the applicable trend adjustment percentage is 25 percent.

Step 3:   0.50 * 0.25 = 0.125

Step 4:   (a)   2020: 2023 - 2020 = 3

              (b)   2019: not eligible for trend due to the actual yield is excluded for YE

              (c)   2018: not eligible for trend

              (d)   2017: not eligible for trend

Step 5:   (a)   2020: 3 * 0.125 = 0.375

              (b)   2019: not eligible for trend due to the actual yield is excluded for YE

              (c)   2018: not eligible for trend

              (d)   2017: not eligible for trend

Step 6:   (a)   **2020**: 17 + 0.375 = 17.375 (17 is used due to YA election)

                (b)   **2019**: 29 (29 is used due to YE causing less than 4 years of actuals in the APH database and the APH database being completed with the T-Yield)

                (c)   **2018**: 29 + 0 = 29

                (d)   **2017**: 29 + 0 = 29

Step 7:   (17 + 29 + 29 + 29) / 4 = 26

Step 8:   26 > (14 + 2 = 16). Approved APH yield = 23.

                Note: The TA limitation of the approved APH yield in Para. 21H limits the approved APH yield to the highest actual yield in the APH database with one year of trend adjustment; however, the approved APH yield will not be less than the adjusted yield. Also, the approved APH yield was calculated at 26 with TA, YA, and YE elected together, however, TA limited the approved APH yield to the adjusted yield of 23.

Step 9:   (17 + 17 + 29 + 29) / 4 = 23. APH yield without trend adjustment (adjusted yield) = 23.

Resulting APH Database

2023	Unit # 0001-0002 OU	Soybeans (0081)	NFAC (053)	Commodity (091)
Year	**Production**	**Acres**	**Yield**
2017			T29
2018			T29
2019	600	100.0	A6
2020	1,400	100.0	A14
		Approved Yield	23
T-Yield = 29		Average Yield	20
		Rate Yield	20

Cotton: King County, TX: 2023 T-Yield = 278

Prior year's approved APH yield: 501

T-Yields: 2020-2022 = 307

2014-2019 = 256

2013 = 213

Eligible yield exclusion years: 2021, 2020, 2018, 2016, 2013 (identified with *)

Trend adjustment: 4.4

Year	Production	Acres	Yield Descriptor	Yield	YA	YE Opt-out	TA
2013	187,846	566.4	A	332		*	376
2014	228,861	318.0	A	720			760
2015	48,341	324.5	A	149	154		189
2016	43,441	324.5	A	134	154	*	
2017	177,521	318.5	A	557			583
2018	0	332.8	A	0	154	*	
2019	0	332.8	A	0	154		172
2020	1,655	332.8	A	5	154	*	
2021			Z			*	
2022	92,447	328.4	A	282			286
	Rate Yield = 242		Average Yield = 242				
	Adjusted Yield = 299		Prior Year's Approved Yield = 201			Approved Yield = 451	

* - means year is eligible to be excluded if YE is elected

(1)   Approved APH yield with YA: (332 + 720 + 154 + 154 + 557 + 154 + 154 + 184 + 282) / 9 = 299

(2)   Approved APH yield with YA and YE: (332 + 720 + 154 + 557 + 154 + 282) / 6 = 367

(3)   Approved APH yield YA, YE and TA: (376 + 760 + 189 + 583 + 172 + 286) / 6 = 394

(4)   Approved APH yield with YA, YE, TA, and YC: 501 * 0.9 = 451

Note: The approved APH yield is equal to the cupped yield because insured elected YC, did not opt-out of the cup applying to this APH database, and the cupped yield is higher than approved APH calculated using YA, YE, and TA.

In this example, the YC option code must be identified on the P15 yield record transmitted to RMA and the yield limitation flag (YLF) must be set to 09 (because YA was elected). If the insured did not elect YA; the yield limitation flag must be set to 16 with the YC option code identified on the P15 yield record.

Exhibit 8   Example Trend-Adjusted APH Database with QL

Insured has produced wheat in a single basic unit (BU) APH database since 2019. The county T-Yield is 66 bushels. For 2023, the insured has elected QL, and in the 2019 crop year they filed a NOL for the quality loss that they experienced in that crop year. The insured has also elected Trend-Adjusted APH. The trend adjustment for wheat in the insured's county is 1. The insured provides an acceptable production report in 2023 and APH database is updated.

Original APH Database

2023	Unit # 0001-0000 BU	Wheat (0011)	NI (003)
Year	Production	Acres	Yield
2019	7,500	150.0	A50
2020	9,300	100.0	A93
2021	11,400	150.0	A76
2022	9,700	100.0	A97
		Approved Yield	79
T-Yield = 66		Average Yield	79
		Rate Yield	79

To calculate the approved APH yield using trend adjustment:

Step 1:   The APH database has at least an actual yield in one of the four most recent crop years qualifying for trend adjustment.

Step 2:   The APH database has four actual yields in the most recent 12 crop years; therefore, the applicable trend adjustment percentage is 100 percent.

Step 3:   1.00 * 2 = 2

Step 4:   (a)   2022: 2023 - 2022 = 1

    (b)   2021: 2023 - 2021 = 2

    (c)   2020: 2023 - 2020 = 3

    (d)   2019: 2023 - 2019 = 4

Step 5:   (a)   2022: 1 * 1 = 1

    (b)   2021: 2 * 1 = 2

    (c)   2020: 3 * 1 = 3

    (d)   2019: 4 * 1 = 4

Exhibit 8   Example Trend-Adjusted APH Database with QL (Continued)

Step 6:   (a)   **2022**: 97 + 1 = 98

                   (b)   **2021**: 76 + 2 = 78

                   (c)   **2020**: 93 + 3 = 96

                   (d)   **2019**: 81 + 4 = 85 (81 is used due to QL election)

Step 7:   (98 + 78 + 96 + 85) / 4 = 89

Step 8:   89 < (97 + 1 = 98). Approved APH yield = 89.

Step 9:   (97 + 76 + 93 + 50) / 4 = 79. APH yield without trend adjustment = 79.

Resulting APH Database

2023   **Unit # 0001-0000 BU**   **Wheat (0011)**   **NI (003)**   **TA, QL**

Year	Production	Pre-Quality Production	Acres	Yield	Pre-Quality Yield
2019	7,500	12,150	150.0	A50	81
2020	9,300		100.0	A93	
2021	11,400		150.0	A76	
2022	9,700		100.0	A97	
			Approved Yield	**89**	
	T-Yield = 66		Average Yield	79	
			Rate Yield	79	